

(12) **United States Patent**
Martin et al.

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(54) **MULTIPLE LUMEN CATHETER**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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Related U.S. Application Data

(63) Continuation of application No. 08/481,169, filed on Jun. 7, 1995, now Pat. No. 5,797,869, which is a continuation of application No. 08/205,331, filed on Mar. 3, 1994, now Pat. No. 5,472,417, which is a continuation of application No. 07/785,351, filed on Oct. 30, 1991, now abandoned, which is a continuation of application No. 07/288,364, filed on Dec. 27, 1992, now Pat. No. 5,195,942.

(30) **Foreign Application Priority Data**

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(52) U.S. Cl. 604/43; 604/264; 604/523
(58) Field of Search 138/111-117; 604/4-7, 604/43, 164-169, 264, 523, 524

(56) **References Cited**

U.S. PATENT DOCUMENTS

Re. 31,873 4/1985 Ilowes.
D. 272,651 2/1984 Mahurkar.
550,238 11/1993 Aliza, Jr.
1,696,018 12/1928 Schellberg.
1,922,084 8/1933 Gerow.

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

0834211	2/1976 (BE).
0960932	1/1975 (CA).
1092927	1/1981 (CA).

(List continued on next page.)

OTHER PUBLICATIONS

Stephen P. Gatt, *A Quadruplo-Lumen Intravenous Infusion Catheter*, 11 Anesth Intens Care 261-62 (1983).

Arrow International, Inc., 510(k) Notification for *Multi-Lumen M.I.S.™ Catheterization System* (Apr. 14, 1982).

Arrow International, Inc., 510(k) Notification for *Arrow Central Venous Multi-Lumen Catheter with Flex Tip* (Aug. 25, 1986).

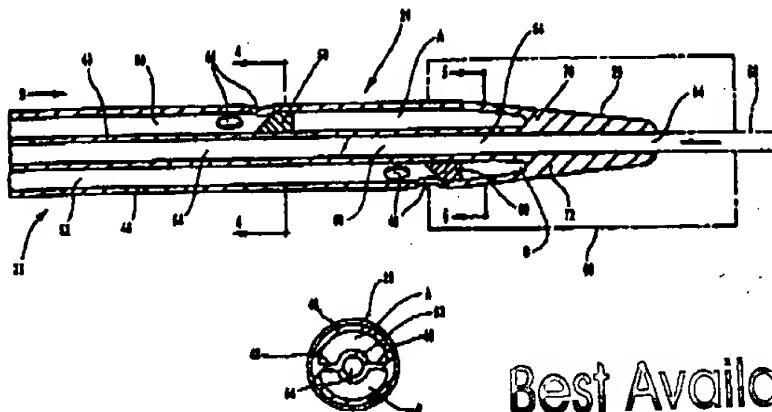
(List continued on next page.)

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(57) **ABSTRACT**

The invention provides a cylindrical elongate body extending from a proximal to a distal end, the body defining two similar longitudinally extending lumens separated by a septum and a further lumen defined within the septum, a tip extending from the distal end of the body defining a part of the further lumen, a connector at the proximal end, tubes coupled to the connector and in fluid communication through the connector one with each of the respective lumens, the body defining openings providing access one to each of the longitudinally extending lumens, the openings being spaced from one another longitudinally of the body and the further lumen extending longitudinally beyond the longitudinally extending lumens and through the tip, the further lumen terminating at an opening at the distal end of the tip and the tip being convergently tapered as it extends longitudinally from the body and the longitudinally extending lumens being blocked immediately adjacent and distally of the openings.

18 Claims, 9 Drawing Sheets



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